IN THE CLAIMS

1-43. (Cancelled)

44. (Currently amended) A method for making a silica glass crucible, comprising:

introducing into a rotating crucible mold outer silica grain doped with aluminum to form an outer layer;

introducing into said mold bulk silica grain consisting essentially of quartz grain to form a bulky wall including a bottom wall and a side wall;

heating the interior of the mold; and

introducing into said mold inner silica grain doped with aluminum, wherein the heat fuses said outer and bulk silica grains and at least partially melts said inner silica grain and fuses said at least partially molten inner silica grain to the bulk wall to form an innermost layer having a thickness of .2mm to less than .5mm.

45. (Currently amended) The method of claim 44, further comprising cooling the fused silica grains so as to form within the innermost layer a plurality of nuclei of crystalline silica.

46. (Previously presented) The method of claim 45, wherein cooling comprises maintaining the crucible in the range of 400-600°C for approximately 25 minute.

47. (Previously presented) The method of claim 45, wherein cooling comprises maintaining the crucible in the range of 1400-1600°C for approximately one minute.

48. (Previously presented) The method of claim 44, wherein the outer layer is formed substantially on the side wall.

49. Canceled.

50. (Previously presented) The method of claim 44, wherein the inner silica grain is doped with aluminum in the range of 50–500ppm.

51. (Previously presented) The method of claim 44, wherein the outer silica grain is doped with aluminum in the range of 100–500ppm.

52. (Currently amended) A method for making a silica glass crucible, comprising:

introducing into a rotating crucible mold bulk silica grain consisting essentially of pure silica grain to form a bulk grain wall having a bottom wall and a side wall;

heating the interior of the mold;

introducing into said mold inner silica grain doped with aluminum, wherein the heat fuses said bulk silica grain and at least partially melts said inner silica grain and fuses said at least partially molten inner silica grain to the bulk grain wall to form a homogenously aluminum-doped innermost layer having a depth in the range of .2mm to less than .5mm and being homogenously doped with aluminum in the range of about 50-500ppm.

53. (Currently amended) The method of claim 52, further comprising cooling so as to form within the innermost layer a plurality of nuclei of crystalline silica.

54. (Previously presented) The method of claim 53, wherein cooling comprises maintaining the crucible in the range of 400-600°C for approximately 25 minute.

55. (Previously presented) The method of claim 53, wherein cooling comprises maintaining the crucible in the range of 1400-1600°C for approximately one minute.

56. Canceled.

57. Canceled.

58. (Currently amended) The method of claim 52, wherein the innermost layer is doped with aluminum in the range of about 80–160ppm.

59. (Currently amended) The method of claim 52, wherein the innermost layer is doped with aluminum in the range of about 100–120ppm.

60-85. (Cancelled)

86. (New) The method of claim 44 wherein introducing into said mold inner silica grain doped with aluminum further comprises introducing into said mold inner silica grain homogenously doped with aluminum, wherein the heat fuses said outer and bulk silica grains and at least partially melts said homogenously doped inner silica grain and fuses said at least partially molten homogenously doped inner silica grain to the bulk wall to form an homogenously doped innermost layer having a thickness of .2mm to less than .5mm.